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**Small et al.**

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(54) **SECURE AND TRACEABLE MANUFACTURED PARTS**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 130 days.

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### Related U.S. Application Data

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(57) **ABSTRACT**

A method for the verification and authentication of additive manufactured product, comprising the steps of receiving, from a customer, at least one customer requirement for a product, deriving at least one manufacturing requirement and generating a product geometry file for the product, recording, by a first computing device, to a distributed transaction register, a first transaction reflecting certification of the product geometry file, obtaining a first output reflecting the first transaction, printing the product with a 3D printer, recording, by a second computing device, to the distributed transaction register, a second transaction reflecting the printing of the product and the first output, obtaining a second output reflecting the second transaction, embedding within the product a unique code reflecting the second output, whereby the product geometry file and the printing of said product may be verified with the unique code such that the product may be authenticated.

**13 Claims, 30 Drawing Sheets**

